Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.07.2013 *Revision: 08.06.2011*

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name ***Sodium chlorite, tech. nominally 80%***
Stock number: 14265
1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
Informing department: Product safety Tel + +049 (0) 7275 988687-0
1.4 Emergency telephone number: Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008


GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.


GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.


GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.


GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC


T; Toxic

R24: Toxic in contact with skin.


C; Corrosive

R34: Causes burns.


Xn; Harmful

R22: Harmful if swallowed.


O; Oxidising

R8: Contact with combustible material may cause fire.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment: The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Other hazards that do not result in classification No information known.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
Hazard pictograms GHS03, GHS05, GHS06
Signal word Danger

Hazard-determining components of labelling:
Sodium chlorite
Sodium hydroxide
sodium chlorate

Hazard statements
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P221 Take any precaution to avoid mixing with combustibles.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P361 Remove/Take off immediately all contaminated clothing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Dangerous components:

CAS: 7758-19-2 EINECS: 231-836-6	Sodium chlorite	T R24; Xn R22 Ox. Sol. 2, H272; Acute Tox. 3, H311; Acute Tox. 4, H302	80,0%

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.07.2013 *Revision: 08.06.2011*

Trade name *Sodium chlorite, tech. nominally 80%*

(Contd. of page 1)

CAS: 7775-09-9 EINECS: 231-887-4	sodium chlorate	Xn R22; O R9; N R51/53 Ox. Sol. 1, H271; Aquatic Chronic 2, H411; Acute Tox. 4, H302	3,0%
CAS: 1310-73-2 EINECS: 215-185-5	Sodium hydroxide	C R35 Skin Corr. 1A, H314	3,0%
CAS: 497-19-8 EINECS: 207-838-8	Sodium carbonate	Xi R36 Eye Irrit. 2, H319	2,0%

Additional information None known.

Non-Hazardous Ingredients

CAS: 7647-14-5 EINECS: 231-598-3	Sodium chloride	10,0%
CAS: 7757-82-6 EINECS: 231-820-9	Sodium sulphate	0,3%
CAS: 7732-18-5 EINECS: 231-791-2	Water	1,7%

SECTION 4: First aid measures

4.1 Description of first aid measures
General information Instantly remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.
After skin contact Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing Seek medical treatment.
4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents CO_2, sand, extinguishing powder. Do not use water.
5.2 Special hazards arising from the substance or mixture This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
If this product is involved in a fire, the following can be released:
5.3 Advice for firefighters
Protective equipment: Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
6.2 Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up: Use neutralizing agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Prevention of secondary hazards: Acts as an oxidizing agent on organic materials such as wood, paper and fats
Keep away from combustible material.
6.4 Reference to other sections See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires: Substance/product can reduce the ignition temperature of flammable substances.
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Store away from flammable substances.
Store away from reducing agents.
Do not store with organic materials.
Store away from metal powders.
Store away from water.
Further information about storage conditions: This product is hygroscopic.
Store under dry inert gas.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.07.2013 *Revision: 08.06.2011*

Trade name *Sodium chlorite, tech. nominally 80%*

(Contd. of page 2)

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

1310-73-2 Sodium hydroxide (3,0%)

MAK (Germany)	vgl.Abschn.IIb
MAK (TRGS 900) (Germany)	2 E mg/m³ DFG, Y, u.D.
PEL (USA)	2 mg/m³
REL (USA)	Short-term value: C 2 mg/m³
TLV (USA)	Short-term value: C 2 mg/m³

Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use breathing protection with high concentrations.
Protection of hands: Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Material of gloves Impervious gloves
Penetration time of glove material Not determined
Eye protection: Tightly sealed safety glasses.
Full face protection
Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Powder
Colour: White
Smell: Not determined
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined
Inflammability (solid, gaseous) Contact with combustible material may cause fire.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-inflammability: Product is not selfigniting.
Critical values for explosion:
Lower: Not determined
Upper: Not determined
Steam pressure: Not applicable.
Density Not determined
Relative density Not determined.
Vapour density Not applicable.
Evaporation rate Not applicable.
Solubility in / Miscibility with
Water: Insoluble
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.

Solvent content:
Organic solvents: 0,0 %

Solids content: 98,3 %
9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity May intensify fire; oxidiser.
10.2 Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions Reacts with reducing agents
Reacts with flammable substances
10.5 Incompatible materials: Reducing agents
Flammable substances
Water/moisture
Organic materials
Metal powders

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity: Harmful if swallowed.
Danger by skin resorption.
Toxic in contact with skin.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.07.2013 *Revision: 08.06.2011*

Trade name *Sodium chlorite, tech. nominally 80%*

(Contd. of page 3)

LD/LC50 values that are relevant for classification:

7775-09-9 sodium chlorate		
Oral	LD50	1200 mg/kg (rat)

497-19-8 Sodium carbonate		
Oral	LD50	4090 mg/kg (rat)

Skin irritation or corrosion: Causes severe skin burns.
Eye irritation or corrosion: Causes serious eye damage.
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
Carcinogenicity: EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.
IARC-3: Not classifiable as to carcinogenicity to humans.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Experience with humans: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Toxic in contact with skin.
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful
Corrosive

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Ecotoxical effects:
Remark: Harmful to aquatic organisms
Additional ecological information:
General notes: Do not allow product to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Harmful to aquatic organisms
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA UN1496

14.2 UN proper shipping name
ADR 1496 SODIUM CHLORITE
IMDG, IATA SODIUM CHLORITE

14.3 Transport hazard class(es)

ADR

Class 5.1 (O2) Oxidising substances.
Label 5.1

IMDG, IATA

Class 5.1 Oxidising substances.
Label 5.1

Packing group
ADR, IMDG, IATA II

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user Warning: Oxidising substances.
Kemler Number: 50

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.07.2013 *Revision: 08.06.2011*

Trade name *Sodium chlorite, tech. nominally 80%*

(Contd. of page 4)

Transport/Additional information:

ADR

Excepted quantities (EQ):	E2
Limited quantities (LQ)	1 kg
Transport category	2
Tunnel restriction code	E
UN "Model Regulation":	UN1496, SODIUM CHLORITE, 5.1, II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical Substances

All ingredients are listed.

Standard for the Uniform Scheduling of Drugs and Poisons

7775-09-9	sodium chlorate	S5
1310-73-2	Sodium hydroxide	S5+APPENDI

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Classification according to VbF: Not applicable

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances)

None of the ingredients is listed.

Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

REACH - Pre-registered substances

All ingredients are listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Relevant phrases

H271 May cause fire or explosion; strong oxidiser.
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.
R24 Toxic in contact with skin.
R35 Causes severe burns.
R36 Irritating to eyes.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R9 Explosive when mixed with combustible material.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent